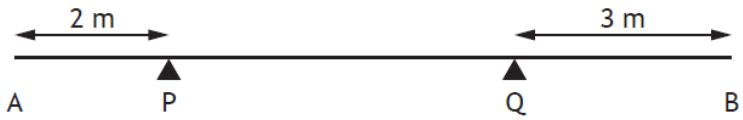
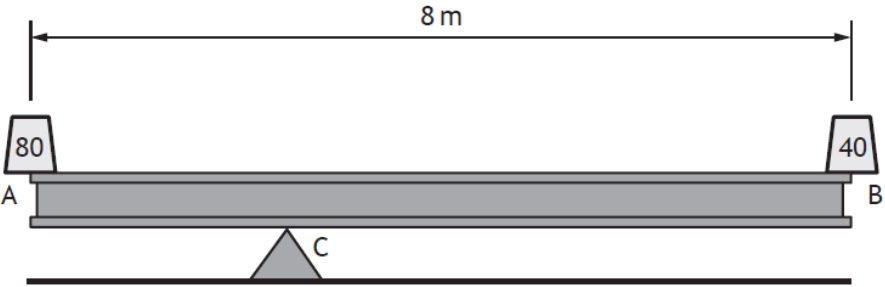


## Moments

2016 EX	<p>3. A uniform rod AB of mass 80 kg and length 10 m rests in equilibrium on two supports, P and Q, as shown in the diagram.</p> <p><math>AP = 2</math> m and <math>QB = 3</math> m.</p>  <p>(a) Find the magnitudes of the reactions at P and Q. <span style="float: right;">3</span></p> <p>An additional mass of <math>M</math> kg is placed at B.</p> <p>(b) Find <math>M</math> if the rod is about to tilt. <span style="float: right;">2</span></p>
2017	<p>4. A uniform beam of length 8 metres has mass 200 kg and has a support placed at C. To enable it to rest horizontally, masses of 80 kg and 40 kg are attached at ends A and B as shown in the diagram.</p>  <p>Determine the position of the support relative to the point A. <span style="float: right;">4</span></p>